

Biruk Aynalem

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Full-stack developer with 3+ years of experience shipping across the stack in energy tech, government, and enterprise software. Track record includes \$5M in cost savings, 30% performance gains, and systems running in production at scale.

EXPERIENCE

Full Stack Developer

January 2026 – Present

Digital Power

Remote, New York

- Implemented Keycloak SSO authentication end-to-end, covering OAuth2 code exchange, JWKS-based JWT verification, and custom token issuance, plus a zero-downtime user migration script to the Keycloak realm via the Admin API.
- Built a multi-country meter onboarding system supporting UK (ECOES/MPAN) and German (FirstX/DSO) regulatory frameworks, extending the platform's addressable market with a single unified API branching on country code.
- Designed a Celery-powered consumption estimation engine that continuously computes and backfills daily meter records from prognosis and contracted data, with full audit-log tracking and bulk-optimised database writes.
- Overhauled the operations dashboard with column-level filtering, a Formik-based Bulk Patch modal with confirmation guard, and a user-driven async Excel export pipeline where the frontend controls column order and visibility.

Full Stack Developer

April 2024 - December 2025

Nexisol IT Solutions

Addis Ababa, Ethiopia

- Developed and maintained a microservice enabling seamless communication across multiple ERP modules, reducing inter-module latency by 15% through efficient API design.
- Built and optimized an enterprise-grade HR management system with robust authentication, granular role management, pagination, and input validation, resulting in improved security and user experience.
- Integrated CI/CD pipelines and automated testing for the ERP microservice, cutting deployment time by 40%.

Software Engineer

May 2023 - March 2024

Institute of Foreign Affairs

Addis Ababa, Ethiopia

- Developed automation and paperless solutions to facilitate day-to-day office work that reduced administrative time by 20% and eliminated the need for staff to visit the ICT office for assistance.
- Designed and implemented a cost-effective server pool architecture utilizing existing resources at the Institute which saved up to 5 million in costs.

PROJECTS

Vega | *Python, Django, Vuejs, PostgreSQL, Pytorch*

- Developed a human free complete (vocal+instrumental+mixing) music generation app with both mobile and web client that leverage generative AI.
- Developed and Trained a vocal model, Oscillate. Demo can be found [here](#).

EDUCATION

Bahir Dar University

Bahir Dar, Ethiopia

Bachelor of Science in Computer Engineering

September 2019 – August 2023

SKILLS

Languages: Python, SQL (Postgres), NoSQL (MongoDB), JavaScript, Typescript, HTML/CSS

Frameworks: React, Vue, Django, Node.js, Express, NextJS, Flask

Developer Tools: Git, Docker, Figma, VS Code, PyCharm, Debian Linux Family

Libraries: react-three-fiber, threejs, Tensorflow, Pytorch

Soft skills: Communication, Problem-Solving, Leadership, Work Ethic